

THIN FILM INK JET PRINthead ADHESION ENHANCEMENT

Abstract of the Disclosure

An ink jet printhead for an ink jet printer and method for making an improved printhead. The printhead includes a nozzle plate attached to a heater chip. The heater chip is a semiconductor substrate having a resistive layer deposited on the substrate, a dielectric layer deposited on the resistive layer, a cavitation layer for contact with ink, and an adhesion layer between the dielectric layer and cavitation layer. The adhesion layer is selected from the group consisting of tantalum nitride (TaN), tantalum oxide (TaO), silicon nitride (SiN), and titanium nitride (TiN), provided the adhesion layer and cavitation layer are selected so that the adhesion layer has no elemental component in common with the cavitation layer when the dielectric layer is comprised of SiC/SiN. Adhesion between the dielectric layer and cavitation layer is significantly enhanced by the invention.

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